

**Application for Locally Adopted Energy Standards  
by the City of Rohnert Park In Accordance With  
Section 10-106 of the California Code of Regulations,  
Title 24, Part 1**

Revised February 1, 2007

**From:**  
**Peter Bruck, Building Official**  
**City of Rohnert Park**  
**6750 Commerce Boulevard**  
**Rohnert Park, CA 94928-2486**  
**(707) 588-2257**  
**Email: [pbruck@rpcity.org](mailto:pbruck@rpcity.org)**

Report prepared by:  
Michael Gabel  
Gabel Associates, LLC  
1818 Harmon Street, Suite #1  
Berkeley, CA 94703  
(510) 428-0803  
Email: [mike@gabelenergy.com](mailto:mike@gabelenergy.com)

## **Table of Contents**

<i>1.0 Executive Summary .....</i>	<i>1</i>
<i>2.0 Impacts of the New Ordinance .....</i>	<i>3</i>
<i>3.0 Cost Effectiveness .....</i>	<i>6</i>
<i>4.0 Implementation Plan .....</i>	<i>7</i>
<i>5.0 Language of the New Ordinance .....</i>	<i>8</i>
<i>Appendix A: Compliance Forms .....</i>	<i>14</i>

## **1.0 Executive Summary**

The City of Rohnert Park has researched and reviewed the feasibility and cost-effectiveness of building permit applicants exceeding the performance requirements of the 2005 Residential Building Energy Efficiency Standards. Having developed the final draft language for the Rohnert Park Energy Efficiency Ordinance included as Section 5 of this document, the City would like to implement this Ordinance at the earliest convenient date following approval by the California Energy Commission.

The City of Rohnert Park has retained Gabel Associates, LLC to assist the City in this application to the Commission. As stated in the Ordinance application, the proposed local energy efficiency standards and implementation have been designed with several key criteria in mind. These include:

- Consistency with the structure, format and calculation methods of the 2005 Residential Title 24 Building Energy Efficiency Standards;
- Simplicity and clarity for building department enforcement for both energy plan review and field inspection;
- Meeting the local energy compliance requirements as defined by the Ordinance which exceed the 2005 Residential Title 24 standards; and,
- The provision of flexibility for building permit applicants in meeting the Ordinance by the performance approach using building and appliance energy conservation measures.

This application to the California Energy Commission conforms to the requirements laid out in Section 10-106 of the California Code of Regulations, Title 24, Part 1, *LOCALLY ADOPTED ENERGY STANDARDS*. The proposed Ordinance shall take effect only after the Commission has reviewed and formally approved the proposed local energy standards as meeting all requirements of Section 10-106, and the Ordinance has been filed with the Building Standards Commission.

**Statement per Section 10-106(b)3.** The proposed Ordinance requires that all buildings are designed to consume no more TDV energy than permitted by Title 24, Part 6. The main features of the proposed ordinance are that:

- (a) Single family houses and residential additions equal to or greater than 1000 square feet consume at least 10% to 15% less TDV energy than the energy use permitted by the 2005 standards, as specified according to conditioned floor area; and,
- (b) A few mandatory measures not a part of the 2005 standards are added.

With respect to any technical questions concerning the development, methodology, descriptions or implementation outlined in this application, please contact Michael Gabel at Gabel Associates, LLC.

## **2.0 Impacts of the New Ordinance on Residential Buildings**

The following methodology and assumptions are used in evaluating the impact of the Ordinance on single family homes.

**Actual Home Designs.** Five recent home designs submitted to a local building department Building Department have been modeled in an effort to determine the cost-effectiveness of the proposed City of Rohnert Park Energy Ordinance. Each design, as summarized below, meets the 2005 Building Energy Efficiency Standards as designed. The second run for each home design was developed to just meet the proposed energy ordinance. The energy measures, their first cost and resulting annual energy cost savings were then evaluated to determine a simple payback period.

**1,418 SF (A) 2-story home**, without duct sealing **26.83% total fenestration** area:

- R-38 roof with radiant barrier
- R-13 exterior walls
- R-30 raised floor
- Andersen Low-E windows,  $U=0.35$ ,  $SHGC=0.35$  w/ a few small overhangs
- Furnace: 80% AFUE
- No Cooling
- R-6 ducts in the attic
- DHW: 50 gallon gas water heater,  $EF=0.62$ ; no pipe insulation

**1,418 SF (B) 2-story home**, with duct sealing **26.83% total fenestration** area:

- R-30 roof with no radiant barrier
- R-13 exterior walls
- R-19 raised floor
- Andersen Low-E windows,  $U=0.35$ ,  $SHGC=0.35$  w/ a few small overhangs
- Furnace: 80% AFUE
- No Cooling
- R-6 ducts in the attic
- DHW: 50 gallon gas water heater,  $EF=0.58$ ; no pipe insulation

**1,775 SF 2-story home** as designed, without duct sealing **12.96% total fenestration** area:

- R-30 roof with no radiant barrier
- R-13 and R-19 exterior walls
- 31% of house footprint R-19 raised floor
- 69% of house footprint covered slab floor
- Vinyl Low-E windows,  $U=0.40$ ,  $SHGC=0.38$  w/ one overhang
- Furnace: 90% AFUE
- 13.0 SEER
- R-6 ducts in the attic
- DHW: 50 gallon gas water heater,  $EF=0.62$ ; no pipe insulation

**2,682 SF 2-story home** as designed, without duct sealing **22.26% total fenestration area:**

- R-38 roof with no radiant barrier
- R-13 exterior walls
- Covered slab floor
- Vinyl Low-E windows,  $U=0.40$ ,  $SHGC=0.38$  w/ one overhang
- Furnace: 90% AFUE
- 13.0 SEER
- R-6 ducts in the attic
- DHW: 50 gallon gas water heater,  $EF=0.62$ ; no pipe insulation

**3,024 SF 2-story home** as designed, without duct sealing **22.91% total fenestration area:**

- R-38 roof with no radiant barrier
- R-13 and R-19 exterior walls
- 78% of footprint is covered slab floor; 22% of footprint is R-19 raised floor
- Vinyl Low-E windows, avg.  $U=0.36$ , avg.  $SHGC=0.35$  w/ many overhangs
- Furnace: 80% AFUE
- 13.0 SEER
- R-6 ducts in the attic
- DHW: 50 gallon gas water heater,  $EF=0.62$ ; no pipe insulation

**3,356 SF 2-story home** as designed, without duct sealing **16.48% total fenestration area:**

- R-38 roof with no radiant barrier
- R-13 and R-19 exterior walls
- 74% of footprint is covered slab floor; 26% of footprint is R-19 raised floor
- Vinyl Low-E windows, avg.  $U=0.38$ , avg.  $SHGC=0.36$  w/ many overhangs
- Furnace: 80% AFUE
- 13.0 SEER
- R-6 ducts in the attic
- DHW: 50 gallon gas water heater,  $EF=0.62$ ; no pipe insulation

### **Residential Energy Measures Needed to Meet the Rohnert Park Ordinance.**

Incremental energy measures to meet the Ordinance have been evaluated. The following energy features have been modified from the Title 24 measures so that these home designs use 10% less TDV energy than the Title 24 standard design.

#### **1,418 SF (A)**

- Noritz tankless gas DHW  $EF=0.80$ : incremental cost = \$489
- 90% AFUE furnace: incremental cost = \$450

#### **1,418 SF (B)**

- Noritz tankless gas DHW  $EF=0.80$ : incremental cost = \$727

#### 1,775 SF

- Reduced duct leakage [HERS]: incremental cost = \$800 (no sampling)
- TXV and 11.0 EER [HERS]: incremental cost = \$100 (no sampling)

#### 2,682 SF

- Reduced duct leakage [HERS]: incremental cost = \$800 (no sampling)
- TXV and 11.0 EER [HERS]: incremental cost = \$100 (no sampling)

#### 3,024 SF

- Reduced duct leakage [HERS]: incremental cost = \$800 (no sampling)
- TXV and 11.0 EER [HERS]: incremental cost = \$100 (no sampling)

#### 3,356 SF

- Reduced duct leakage [HERS]: incremental cost = \$800 (no sampling)
- TXV and 11.0 EER [HERS]: incremental cost = \$100 (no sampling)
- Radiant barrier under roof sheathing: incremental cost = \$579

Note that the incremental energy design improvements specified above to meet the proposed Ordinance requirements do not include a host of building/system measures which also can effectively be used within the Title 24 performance method. Depending upon the specific opportunities available for the particular building design and orientation, any actual building can use many additional measures in an enormous variety of combinations to meet the proposed Rohnert Park requirements including:

- Additional fixed overhangs and side-fins for glazing which are effective within the Rohnert Park climate zone;
- Credit for zonal controls for living and sleeping zones within each home;
- Additional HERS measures such as building leakage testing, insulation quality, duct design and proper cooling equipment sizing;
- Thermal mass credit when the sum of all interior masonry surfaces exceed 30% of the conditioned floor area of the house; and,
- Residential ice storage (e.g., Ice Energy system) which shifts on-peak electricity usage to off-peak hours is not considered.

### 3.0 Cost Effectiveness

The cost effectiveness of meeting the requirements of the Ordinance is calculated for the homes analyzed above. The total incremental first cost of the measures needed to meet the Rohnert Park Ordinance is divided by the incremental annual energy cost saving to establish the Simple Payback for the additional energy features. The study uses an average utility rate price of **\$0.16/kWh** for electricity and **\$1.23/therm** for natural gas.

*Table 1a: Summary of Energy Savings from Rohnert Park Energy Ordinance*

Home Design	Electricity Saving (kWh/yr)	Gas Saving (therms/yr)	Electricity Cost Saving (\$)	Nat. Gas Cost Saving (\$)	Total Annual Cost Saving (\$)
<b>1,418 sf (A)</b>	93	70	\$15	\$86	<b>\$101</b>
<b>1,418 sf (B)</b>	0	74	\$0	\$91	<b>\$91</b>
<b>1,775 sf</b>	224	49	\$36	\$60	<b>\$96</b>
<b>2,682 sf</b>	226	76	\$36	\$94	<b>\$130</b>
<b>3,024 sf</b>	307	93	\$49	\$114	<b>\$163</b>
<b>3,356 sf</b>	283	100	\$45	123	<b>\$168</b>

*Table 1b: Summary of Simple Payback for Rohnert Park Energy Measures*

Home Design	Incremental First <sup>2</sup> Cost Compared w/ Title 24 House (\$) Min / Max	Effective <sup>1</sup> Incremental Annual Energy Cost Saving (\$)	Simple Payback (Years) Min / Max
<b>1,418 sf (A)</b>	<b>\$939</b>	<b>\$56</b>	<b>16.8</b>
<b>1,418 sf (B)</b>	<b>\$727</b>	<b>\$56</b>	<b>13.0</b>
<b>1,775 sf</b>	<b>\$472 - \$900</b>	<b>\$53 - \$73</b>	<b>6.5 / 17.0</b>
<b>2,682 sf</b>	<b>\$472 - \$900</b>	<b>\$87 - \$107</b>	<b>4.4 / 10.3</b>
<b>3,024 sf</b>	<b>\$472 - \$900</b>	<b>\$120 - \$140</b>	<b>3.4 / 7.5</b>
<b>3,356 sf</b>	<b>\$1051 - \$1479</b>	<b>\$97 - \$113</b>	<b>9.3 / 15.2</b>

*Note 1: The Effective Incremental Annual Energy Cost Saving includes a reduction in energy cost savings to account for the after-tax carrying cost of increasing a 6.0% APR home mortgage amount by the Incremental First Cost.*

*Note 2: The Minimum Incremental First Cost assumes that HERS inspections can be done through the use of sampling 1 of 7 homes; while the Maximum assumes that each house requires the specified HERS inspections.*



Based on this data, the Ordinance increases the cost of construction by approximately \$0.20 to \$0.70 per square foot, for which the energy cost savings as a simple payback from first cost is typically in the range of 5 to 15 years.

If the overall cost of new residential construction, including the cost of land and other related permit fees, is in the range of \$300 to \$350 per square foot, the Ordinance will increase that overall cost by approximately one-tenth to two-tenths of one percent

## **4.0 Implementation Plan**

The implementation of the Ordinance is based on the submittal of a single extra one-page form which is printed out from an Excel spreadsheet available from the City of Rohnert Park. Alternatively, a permit applicant can provide the same information on a pre-printed form with calculations listed also provided by the City.

With the exception of a verifying a few additional mandatory measures, the City of Rohnert Park plan review will involve:

- (a) Verifying the occupancy type(s) and scope of work to determine whether and how the Ordinance applies;
- (b) Checking the drawings, specifications and regular Title 24 documentation under the 2005 Building Energy Efficiency Standards; and,
- (c) Checking the one-page additional form which demonstrates compliance with the Ordinance.

Field inspection will be essentially identical to working with the current standards, with the inclusion of a few additional locally adopted mandatory measures.

Gabel Associates will work in conjunction with the City of Rohnert Park to plan all aspects of the implementation, including trainings for the Building Community Development Department, local energy consultants and interested parties (e.g., designers and builders) who would like to learn more about how to meet the Ordinance's energy requirements.

The City will put out information to all relevant professional building industry groups and the California Association of Building Energy Consultants (CABEC) to assist in the transition to working under the new Ordinance.

## **5.0 Text of the Rohnert Park Ordinance**

**ORDINANCE NO. \_\_\_\_**

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF ROHNERT PARK,  
CALIFORNIA, ADDING TITLE 14, CHAPTER 14.02 TO THE ROHNERT PARK  
MUNICIPAL CODE AND ADOPTING LOCAL ENERGY  
EFFICIENCY STANDARDS FOR BUILDINGS COVERED BY THE 2005  
CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS**

**WHEREAS**, California Health and Safety Code Sections 18938 and 17958 provide that the California Building Standards Code establishes building standards for all occupancies throughout the State; and

**WHEREAS**, Health and Safety Code Section 17958.5 provides that a city may establish more restrictive building standards if they are reasonably necessary due to local climatic, geological or topographical conditions; and

**WHEREAS**, the City Council has found that certain modifications and additions to the California Building Standards Code are reasonably necessary based upon local climatic, topographical and geological conditions; and

**WHEREAS**, Public Resource Code Section 25402.1(h)(2) states that a local enforcement agency may adopt more restrictive energy standards when they are cost-effective and approved by the Energy Commission; and

**WHEREAS**, Gabel Associates, LLC has conducted a study to show that the energy conservation measures contained in this ordinance are cost-effective; and

**WHEREAS**, the City included the Gabel Associates study in an application for consideration by the California Energy Commission in compliance with Public Resources Code 25402.1(h)(2); and

**WHEREAS**, the Rohnert Park City Council has identified sustainability as one of its top five goals; and

**WHEREAS**, the Rohnert Park City Council, by resolution, has set a goal for reducing greenhouse gas emissions citywide by 25% below 1990 levels by the year 2015.

**WHEREAS**, on August 22, 2006, the City Council directed city staff to prepare a sustainability ordinance for the City of Rohnert Park that would be located in Title 14 of the Rohnert Park Municipal Code; and

**WHEREAS**, energy efficiency is a key component to sustainability; and

**WHEREAS**, California has been known to experience rolling blackouts during periods of peak energy use due to energy demands greater than what the state's electrical energy system can provide; and

**WHEREAS**, the burning of fossil fuels used in the generation of electric power and heating of buildings contributes to global warming; and

**WHEREAS**, increased global warming could have a significant adverse impact on the local climate and economy; and

**WHEREAS**, the governor of California signed Assembly Bill 32 into law on September 27, 2006, which directs the California EPA to put a cap on the generation of greenhouse gas emissions; and

**WHEREAS**, in accordance with the 2005 California Building Energy Efficiency Standards, including California Code of Regulations, Title 24, Parts 1 and 6 (Standards) all low-rise residential development must meet or exceed the energy requirements contained therein; and

**WHEREAS**, this ordinance requires the application of the Standards, including but not limited to the definitions, procedures, forms, manuals and alternative calculations methods associated with the Standards; and

**WHEREAS**, this ordinance amends the Standards as described herein; and

**WHEREAS**, city staff has prepared the first chapter of the proposed addition to Title 14 of the municipal code, which is chapter 14.02 – Local Energy Efficiency Standards, as directed by the City Council.

**NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF ROHNERT PARK, CALIFORNIA**, does hereby ordain as follows:

**SECTION 1. Findings.**

The City Council finds that:

1. A duly noticed public hearing regarding the proposed addition to the municipal code was held by the City Council on February 13, 2007.
2. The modifications to the 2005 California Building Energy Efficiency Standards are reasonably necessary due to local climatic conditions. As a result of summer ambient temperatures, average load demand and peak load demand of energy used in Rohnert Park are important factors concerning public safety and adverse economic impacts of power outages or power reductions (i.e., “brown-outs”). Reduction of total and peak energy use as a result of incremental energy conservation measures required by this ordinance will have local and regional benefits in the cost-effective reduction of energy costs for the building owner, additional available system energy capacity, and a reduction in greenhouse gas emissions.
3. The proposed ordinance preserves and enhances the environment, in that it would set forth minimum energy efficiency standards within the City of Rohnert Park for all new low-rise residential construction of any size, low-rise residential additions over a certain size threshold, and all residential and non-residential swimming pools and water features. In accordance with CEQA Section 15061(b)(3), “[C]EQA applies only to projects, which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.” Staff has determined that the proposed ordinance is exempt from CEQA review.

**SECTION 2. Chapter 14.02, “Energy Efficiency Standards,” is hereby added to Title 14, “Sustainability,” of the ROHNERT PARK MUNICIPAL CODE** to read and provide as follows:

## **Chapter 14.02 Local Energy Efficiency Standards**

### **14.02.010 Purpose.**

This ordinance sets forth minimum energy efficiency standards within the City of Rohnert Park for all new low-rise residential construction of any size, low-rise residential additions over a certain size threshold, and all residential and non-residential swimming pools and water features.

### **14.02.020 Buildings covered.**

The provisions of this ordinance shall apply to all new low-rise residential construction of any size, low-rise residential additions equal to or greater than 1,000 square feet of conditioned floor area, and all residential and non-residential swimming pools and water features for which a building permit has been applied for and accepted as complete by the Building Division on or after the effective date of this ordinance.

### **14.02.030 Compliance.**

The building official for the City of Rohnert Park shall be charged with enforcing the provisions of this ordinance. A building permit subject to the provisions of this chapter will not be issued by the Building Division unless the energy compliance documentation submitted with the permit application meets the requirements of this chapter. A final inspection of a building permit will not be approved unless the work authorized under a permit has been constructed in accordance with the approved plans, conditions of approvals, and requirements of this chapter.

### **14.02.040 Definitions.**

Terms, phrases and words not defined below, shall have the meaning set forth in the California Code of Regulations, Title 24, Parts 1, 2, or 6.

**AFUE (Annual Fuel Utilization Efficiency)** shall have the meaning set forth in Section 101 (b) of the 2005 California Building Energy Efficiency Standards.

**CONDITIONED FLOOR AREA (CFA)** shall have the meaning set forth in Section 101 (b) of the 2005 California Building Energy Efficiency Standards.

**EXISTING+ADDITION+ALTERATION** means an approach to modeling the energy use of a residential addition, as described in the 2005 Building Energy Efficiency Standards Residential Compliance Manual, to show compliance with the Energy Standards.

**REVISED STANDARD DESIGN TOTAL** means the performance energy budget, in TDV kBtu/sf-yr, which this ordinance establishes for all residential buildings to which it applies. It is defined as the standard design total (TDV kBtu/sf-yr) from any state-approved alternative calculation method (ACM) multiplied by the standard design adjustment factor listed in Table A selected as a function of the building's conditioned floor area.

**STANDARD DESIGN ADJUSTMENT FACTOR** means the arithmetic factor listed in Table A in accordance with the building's conditioned floor area. This factor, when multiplied by the standard design energy budget from a state-approved ACM, produces the revised standard design total.

Table A.

<b>Building Type &amp; Conditioned Floor Area</b>	<b>Standard Design Adjustment Factor</b>	<b>This will exceed T-24 by at least (%)</b>
Single Family Houses = or > 2,000 SF	0.85	15.0%
Single Family Houses 1,900 to 1,999 SF	0.86	14.0%
Single Family Houses 1,800 to 1,899 SF	0.87	13.0%
Single Family Houses 1,700 to 1,799 SF	0.88	12.0%
Single Family Houses 1,600 to 1,699 SF	0.89	11.0%
All Single Family Houses < 1,600 SF	0.90	10.0%
All Residential Additions = or > 1,000	0.90	10.0%

**TDV kBtu/sf-yr** means the amount of energy use in a building determined by the alternative calculation method expressed in terms of thousand British thermal units per square foot per year as modified based upon the time of day such energy is used.

**TIME DEPENDENT VALUATION (TDV) ENERGY** shall have the meaning set forth in Section 101 (b) of the 2005 California Building Energy Efficiency Standards.

#### **14.02.050 Mandatory Requirements.**

All buildings, swimming pools, and water features covered by this ordinance shall include the following mandatory energy measures:

- A. Residential Buildings. All residential buildings shall incorporate the following energy efficient measures:
  1. All exhaust fans shall be Energy Star.
  2. Mastic shall be applied to all joints and seams of ducts conveying conditioned air.
- B. Swimming Pools and Spas. All public and private swimming pools, spas, fountains and water features shall incorporate the following energy conservation features:
  1. All pool and spa natural gas heaters shall have a minimum AFUE of 90% or higher; and

2. All circulating pump motors and filtration pump motors, excepting dedicated pump motors serving only spa jets, with a nominal rating of 0.75 horsepower (i.e.,  $\frac{3}{4}$  HP) or greater shall be two-speed or variable speed motors. The installation of all two-speed and variable speed motors shall include the installation of a controller which shall be time-based and shall be programmed to alternate the speed of the motor between low and high to make effective use of the energy savings potential of the unit's multi-speed capability.

#### **14.020.060 General Requirements.**

The following general compliance requirements must apply to all new low-rise residential construction of any size and residential additions that are 1,000 square feet of conditioned floor area or larger:

- A. The proposed building energy use (TDV KBtu/sf-yr) must be equal to or less than the revised standard design total (TDV KBtu/sf-yr) using the Performance Compliance Approach.
- B. For additions only, the energy efficiency of the existing building may be improved so that the existing building plus the addition meet the revised standard design total energy for the existing +addition+ alteration generated by a state approved alternative calculation method . In modeling buildings to meet this requirement, domestic hot water energy use must be included.  
Exception: When there is no change to a building's existing water heater(s), domestic hot water energy use need not be included in the existing + addition + alteration method.
- C. Special energy compliance form. In addition to the energy compliance documentation required by section 10-103 in the 2005 Energy Efficiency Standards, a special compliance form, RP-RES, shall be submitted to the Building Division. The RP-RES form shall indicate the standard design TDV energy use, the standard design adjustment factor specified in Table A, the revised standard design TDV energy use, and the proposed design TDV energy use. The RP-RES form shall be made available to the public by the Building Division.

#### **14.020.070 Enforcement.**

- A. Violation. Violation of any provision of this chapter due to the applicant's failure to build a project in accordance with plans approved by the Building Division and the conditions of approval in the applicable permit shall be punishable as an infraction as provided in chapter 1.16 of this code.
- B. Civil Penalties. Any person who violates any provision of this chapter is liable to the City for a civil penalty of one thousand dollars.
- C. Cumulative Remedies. The foregoing remedies shall be deemed nonexclusive, cumulative and in addition to any other remedy the City may have at law or in equity, including but not limited to injunctive relief to prevent violations of this chapter.

**SECTION 3. SEVERABILITY**

Should any section, subsection, paragraph, sentence, clause, or phrase of this ordinance be declared unconstitutional or invalid for any reason, such declaration shall not affect the validity of the remaining portions of this ordinance.

**SECTION 4. EFFECTIVE DATE**

This ordinance shall be in full force and effective 30 days after its adoption, and shall be published or posted as required by law.

This ordinance was introduced on the 13th day of February, 2007 and  
*DULY AND REGULARLY ADOPTED this \_\_\_\_ day of \_\_\_\_\_, 2007 by the following vote:*

AYES:

NOES:

ABSENT:

ABSTAIN:

CITY OF ROHNERT PARK

\_\_\_\_\_  
Mayor

ATTEST:

\_\_\_\_\_  
City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
City Attorney

**Appendix A: City of Rohnert Park Compliance Forms**  
**Samples of Excel Spreadsheets to be Provided by the City**

*(Printed forms for hand calculations will also be provided by the City.)*



Project Name/Address:	Smith Residence, 1235 Canyon Drive, Rohnert Park, CA		
Date of Title 24 Report:	12/18/2006	Conditioned Floor Area (SF):	2,315

**1. Calculate Rohnert Park Energy Ordinance Standard Design:**

Standard Design Total TDV KBtu/sf-yr		Adjustment Factor		Revised Standard Design Total TDV KBtu/sf-yr
75.33	x	0.85	=	64.03
[from Part 1, CF-1R]      [from Table A]				
see Note 1 below				

**2. Input Proposed Design Energy Use:**

Proposed Design Total TDV KBtu/sf-yr
62.79
[from Part 1, CF-1R] see Note 1 below]

BUILDING COMPLIES?

YES

**Table A. Standard Design Adjustment Factor**

Building Type	Standard Design Adjustment Factor
Single Family Houses = or > 2,000 SF	0.85
Single Family Houses 1,900 to 1,999 SF	0.86
Single Family Houses 1,800 to 1,899 SF	0.87
Single Family Houses 1,700 to 1,799 SF	0.88
Single Family Houses 1,600 to 1,699 SF	0.89
All Single Family Houses < 1,600 SF	0.90
All Low-Rise Residential Additions = or > 1,000	0.90

Note 1: This value must always include DHW energy use, except in the E+A+A method when there is no change in the existing heater(s).